

## SEA CHANGE

### RISING SEA LEVELS PROMPT A TURN FOR A BAY AREA REGULATORY AGENCY.

BY LISA OWENS VIANI

When Sylvia McLaughlin, Catherine “Kay” Kerr, and Esther Gulick asked the public to send bags of sand to California legislators in the 1960s to protest the paving and filling of San Francisco Bay, they probably couldn’t have imagined a future in which any type of fill would be desirable. More than five decades later, with sea levels rising, the Bay Conservation and Development Commission (BCDC), formed in 1965 as a result of the women’s advocacy, recently amended its Bay Plan to allow for projects that create habitat and increase resilience at the water’s edge.

“The change stems from our ongoing assessment of how we need to do business in light of sea-level rise,” says Megan Hall, a coastal scientist with BCDC who worked on the new policy. “It was a very big pivot from what BCDC was originally built to do.”

The Bay Plan, mandated by state legislators and the governor in 1969 under the McAteer-Petris Act, describes how fill harms the bay’s ecology and sets forth guidelines for protection. Proposals for projects involving any fill in bay waters, including 100 feet inland from the shoreline, must apply for permits

from the BCDC. Prior to the new plan amendment, with a few exceptions, BCDC would not approve any project that included more than a minor amount of fill in the bay, even if it was for habitat restoration.

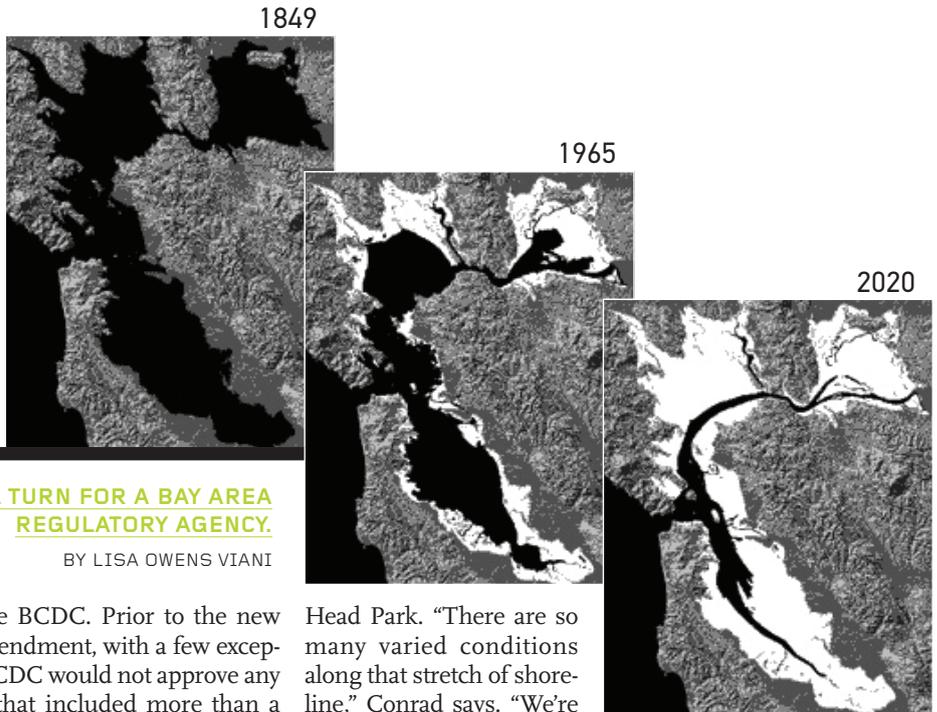
Because much of the San Francisco Bay is hemmed in by development, with little room for marshes to migrate landward, as they do naturally, the new policies give designers more flexibility to create or expand habitat in areas previously not thought possible, such as in bay mudflats. “The challenge of creating a dynamic ecosystem is that you have to work in the footprint of where that ecosystem will function,” says Gena Wirth, ASLA, a design principal with SCAPE Landscape Architecture. Her firm is designing a pebble dune that will reduce flood risk and protect habitat along the bay’s eastern shoreline.

Pamela Conrad, ASLA, a principal at CMG Landscape Architecture, is helping lead the design of the San Francisco Waterfront Resilience Program, which began as a program to strengthen the safety of the city’s seawalls but has now expanded to developing a variety of resilience ideas for 7.5 miles of shoreline stretching from Fisherman’s Wharf to Heron’s

Head Park. “There are so many varied conditions along that stretch of shoreline,” Conrad says. “We’re still in the early planning stages, but there are areas where fill will help us create important habitat while also reducing wave run-up.”

At India Basin, Bionic is working with BCDC on permits for a project that will include eelgrass beds, floating wetlands, and a bioengineered reef. And GGN is working on an adjacent site, replacing a hardened shoreline with a cobble beach and new tidal marsh; both projects may involve some fill.

N. Claire Napawan, an associate professor of landscape architecture at the University of California, Davis, credits scientists, landscape architects, and the public with shifts in approach. “I think most of these sea changes in environmental policy are community driven. The science has been really consistent for decades. What we’re seeing is landscape architects become better advocates for the role of science in building resilience. We’re seeing community groups coalesce behind wanting change,” she says. ●



**ABOVE**  
A 1950s plan promoted by the U.S. Department of Commerce would have filled 325 square miles of San Francisco Bay, turning it into a river by 2020.

**BELOW**  
The bay was filled for industry at Hunters Point in the 1950s.



BAY CONSERVATION AND DEVELOPMENT COMMISSION, TOP; DON LONGANECKER, BOTTOM